

CLAIMS

1. Method for transporting data between a data transmitting network element (DTE) and a data receiving network element (DRE) via a point-to-point connection in a communications network comprising at least one of said data transmitting network element (DTE) and at least one of said data receiving network element (DRE), said method comprising the steps of:

- a. sending data towards said data receiving element (DRE) by said data transmitting element (DTE) via said point-to-point connection;
- 10 b. receiving said data sent by said data transmitting element (DTE) by said data receiving element (DRE), **CHARACTERISED IN THAT SAID** method further comprises the following steps:
 - c. sending an Internet Protocol Control Protocol request for a service level of sending data to said data receiving element (DRE) by said data transmitting element (DTE);
 - 15 d. receiving said Internet Protocol Control Protocol service level request from said data transmitting element (DTE) by said data receiving element (DRE);
 - e. determining by said data receiving element (DRE) a service level based on at least one predetermined criterion and formulating an Internet Protocol Control Protocol propose of said service level that can be provided to said data sending element (DSE);
 - 20 f. sending said Internet Protocol Control Protocol propose of said service level towards said data transmitting element (DTE);
 - 25 g. receiving said Internet Protocol Control Protocol propose of said service level and using said propose of said service level by said data transmitting element (DTE).

2. Method for transporting data between a data transmitting network element (DTE) and a data receiving network element (DRE) via a point-to-point

connection in a communications network comprising at least one of said data transmitting network element (DTE) and at least one of said data receiving network element (DRE), said method comprising the steps of:

- a. sending data towards said data receiving element (DRE) by said data transmitting element (DTE) via said point-to-point connection;
- b. receiving said data sent by said data transmitting element (DTE) by said data receiving element (DRE), **CHARACTERISED IN THAT SAID** method further comprises the following steps:
 - c. determining by said data receiving element (DRE) a service level based on at least one predetermined criterion and formulating an Internet Protocol Control Protocol propose of said service level that can be provided to said data sending element (DSE);
 - d. sending said Internet Protocol Control Protocol propose of said service level towards said data transmitting element (DTE);
 - e. receiving said Internet Protocol Control Protocol propose of said service level and using said propose of said service level by said data transmitting element (DTE).

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3. Data transmitting element (DTE), to be used for sending data, over a link through a communications network towards a data receiving element (DRE), said data transmitting element comprising the following means:
 - a. data sending means (DSM), adapted to send data towards said data receiving element, **CHARACTERISED IN THAT SAID** data transmitting element (DTE) further comprises the following means:
 - b. service level requesting means (SL_R_M), adapted to request said data receiving element (DRE) for a service level for sending said data using an Internet Protocol Control Protocol message;
 - c. service level propose/receiving means (SLP_R_M), coupled with an output to an input of said data sending means (DSM) and adapted to receive an Internet Protocol Control Protocol propose for said service level and to notify said

data sending means (DSM) of said propose for said service level.

4. Data transmitting element (DTE) according to claim 3,

CHARACTERISED IN THAT SAID data transmitting element (DTE), further
5 comprises a service level propose renegotiating means (SLP_RN_M), coupled
between an output-terminal of said service level propose receiving means
(SLP_R_M) and an input-terminal of said service level requesting means (SL_R_M)
and adapted to check if said Internet Protocol Control Protocol propose for said
10 service level is satisfying and if not, to formulate another request for said service
level.

5. Data receiving element (DRE), to be used for receiving data, over a
link through a communications network from a data transmitting element (DTE),
said data receiving element (DRE) comprising the following means:

15 a. data receiving means (DRM), adapted to receive data from said
data transmitting element, **CHARACTERISED IN THAT SAID** data receiving
element (DRE) further comprises the following means:

b. service level request reception means (SLR_Re_M), adapted to
receive a service level request from said data transmitting element (DTE) using an
20 Internet Protocol Control Protocol message;

c. service level negotiating and proposing means (SL_NP_M),
coupled with an input to an output of said service level request reception means
(SLR_Re_M) and adapted to determine a service level based on at least one
predetermined criterion and to formulate a propose for said service level;

25 d. service level proposal sending means (SLP_S_M), coupled with an
input to an output of said service level negotiating and proposing means
(SL_NP_M) and adapted to send said propose for said service level using an
Internet Protocol Control Protocol message.

6. Data receiving element (DRE), to be used for receiving data, over a link through a communications network from a data transmitting element (DTE), said data receiving element (DRE) comprising the following means:

a. data receiving means (DRM), adapted to receive data from said data transmitting element, **CHARACTERISED IN THAT SAID** data receiving element (DRE) further comprises the following means:

b. service level negotiating and proposing means (SL_NP_M), adapted to determine a service level based on at least one predetermined criterion and to formulate a propose for said service level;

c. service level proposal sending means (SLP_S_M), coupled with an input to an output of said service level negotiating and proposing means (SL_NP_M) and adapted to send said propose for said service level using an Internet Protocol Control Protocol message.

7. Software module for running on a processing system for inclusion in a data transmitting element (DTE), for sending data over a link through a communications network towards a data receiving element (DRE), said software module comprising the following sub-modules:

a. data sending sub-module, adapted to send data towards said data receiving element, **CHARACTERISED IN THAT SAID** software module further comprises the following sub-modules:

b. service level requesting sub-module, adapted to request said data receiving element (DRE) for a service level for sending said data using an Internet Protocol Control Protocol message;

c. service level propose receiving sub-module, adapted to receive an Internet Protocol Control Protocol propose for said service level and to notify said data sending sub-module of said propose for said service level.

8. Software module according to claim 7; **CHARACTERISED IN THAT SAID** software module, further comprises a service level propose

renegotiating sub-module, co-operating with said service level propose receiving sub-module and said service level requesting sub-module and adapted to check if said Internet Protocol Control Protocol propose for said service level is satisfying and if not, to formulate another request for said service level.

5 ~~Sub 10~~³ 9. Software module for running on a processing system for inclusion in a data receiving element (DRE), for receiving data over a link through a communications network from a data transmitting element (DTE), said software module comprising the following sub-modules:

- 10 a. data receiving sub-module, adapted to receive data from said data transmitting element (DTE), **CHARACTERISED IN THAT SAID** software module further comprises the following sub-modules:
 - b. service level request reception sub-module, adapted to receive a service level request from said data transmitting element (DTE) using an Internet Protocol Control Protocol message;
 - 15 c. service level negotiating and proposing sub-module, co-operating with said service level request reception sub-module and adapted to determine a service level based on at least one predetermined criterion and to formulate a propose for said service level;
 - d. service level proposal sending sub-module, co-operating with said
 - 20 service level negotiating and proposing sub-module and adapted to send said propose for said service level using an Internet Protocol Control Protocol message.

25 10. Software module for running on a processing system for inclusion in a data receiving element (DRE), for receiving data over a link through a communications network from a data transmitting element (DTE), said software module comprising the following sub-modules:

- 30 a. data receiving sub-module, adapted to receive data from said data transmitting element (DTE), **CHARACTERISED IN THAT SAID** software module further comprises the following means:

- d. service level negotiating and proposing a service level based on a service level proposal
- e. service level proposal : service level negotiating and proposing a service level based on a service level proposal

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